

made better decisions overall. The results suggest that nonexperts can use uncertainty information to improve decision quality, although resulting decisions do not necessarily meet normative standards.

(1037)

Personality Factors in Risk-Taking Tendencies on a Gambling Task. IFEOLUWA TOGUN, REBECCA L. ROBINSON, DANIEL S. LEVINE, PATRICK A. RAMIREZ, & CHELSEA A. ROFF, *University of Texas, Arlington*—Selections of riskier versus less risky alternatives on gambling tasks are known to correlate with outcomes of the riskier alternative. To assess roles of personality differences, we ran three different gamble choices using repeated selection between two virtual card decks and uniform outcomes for each deck across participants. We administered two personality questionnaires to participants: one measuring risk taking (with five subscales), the other measuring sensation seeking. The three gamble choices were certain gain versus high-probability larger gain, low-probability gain versus lower probability larger gain, and certain loss versus high-probability larger loss. Scores on sensation-seeking and risk-taking questionnaires strongly negatively correlated with one another. On the gamble choice involving certain gain versus high-probability larger gain, risky deck selections correlated negatively with sensation seeking, positively with total risk taking, and marginally positively with financial risk taking. All these correlations were reversed on the choice between two low-probability gains. Selections in gambles involving losses were not correlated with personality scores.

(1038)

A Computational Model of Moral Judgment. ADAM B. MOORE, MICHAEL T. TODD, & ANDREW R. A. CONWAY, *Princeton University*—The dual process model (DPM; Greene et al., 2004), currently the dominant view of moral judgment, proposes that such judgments are the product of either fast, automatic emotional processing or slower, voluntary abstract processing. The DPM is supported by evidence that these two modes of processing are linked to partially separable, although interacting, neural circuits. However, the question of how these two types of processes interact to produce moral judgments without being controlled by an homunculus has yet to be answered. We propose a computational model that formalizes a method for integrating causal knowledge and automatic affective responses when generating a moral judgment. Relying on principles derived from reinforcement learning theory, we show that this model is able to account for a complex set of empirical data, while maintaining contact with a wider literature on the neurobiological substrates of moral judgment.

• CATEGORIES AND CONCEPTS •

(1039)

Selective Access to Semantic Memory for Objects Based on Stimulus Modality and Task Demands. EVANGELIA G. CHRYSIKOU & SHARON L. THOMPSON-SCHILL, *University of Pennsylvania*—Object concepts are frequently described as distributed mental representations implemented across interconnected sensory-motor domains. Knowledge of an object's function may be abstracted from its sensory-motor properties. This study examined whether object knowledge is differentially activated for typical and novel functions of objects. Participants viewed either names or grayscale pictures of everyday objects, or a combination of the two, while generating common, secondary, and ad hoc uses for them. Access to semantic memory was assessed quantitatively through voice-onset reaction times and qualitatively through a novel categorization system that classifies object function on a continuum from conceptually driven to perceptually driven responses. The results revealed differences on both measures depending on task demands. Importantly, while generating ad hoc uses, participants exposed to pictorial stimuli generated more conceptually driven responses, closer to an object's typical functional identity. We discuss the implications of these findings for distributed accounts of semantic memory and their applications for real-life tasks.

(1040)

Measuring Efficiency in Function Estimation. DANIEL R. LITTLE & RICHARD M. SHIFFRIN, *Indiana University, Bloomington* (sponsored

by Richard M. Shiffrin)—Typically, we design scientific inferences to trade off fit to observed data (models are good that fit well) and complexity (models or explanations that fit or explain everything are bad). In the present research, we were interested in whether people combine information from noisy data with preexisting beliefs in a manner that balances fit and complexity. We asked observers to estimate functions as causal explanations for a set of noisy data points. The data sets were varied in number of data sets, noise, and extrapolation/interpolation regions. We explored the question of how mental causal models would balance fit and complexity by examining how well the generated functions compared with an ideal, rational solution. Here, the rational solution was instantiated as the posterior of a Bayesian hierarchical regression model. Efficiency was computed in several ways using the Bayesian model averaged posterior predictive distribution from the fit to the observed noisy data.

(1041)

Emotion Recognition in Prosody Is Faster for Pseudosentences Than for Sentences. SÃO LUIS CASTRO & CÉSAR F. LIMA, *University of Porto*—We compared the recognition of emotions in prosody (anger, disgust, fear, happiness, sadness, surprise, and neutrality) for sentences with neutral semantic content and for pseudosentences composed of pseudowords and a few function words. Eighty listeners identified the emotions in a forced choice paradigm, and they also performed intensity judgments. Sentences and pseudosentences elicited similar high accuracy (75% and 71% correct, respectively) and intensity judgments. However, pseudosentences were responded to faster (3,070 msec) than sentences (3,310 msec). The similarity in accuracy and intensity ratings for sentences and pseudosentences indicates that the processing of emotional speech can be performed independently of lexical and semantic content. The longer latencies observed for sentences may reflect the processing cost due to the integration of semantics with prosody. The stimuli devised here constitute a database of Portuguese sentences and pseudosentences for research in emotional prosody.

(1042)

The Effects of Regulatory Focus on Perceptual Triad Classification. JOHN PAUL MINDA & RUBY T. NADLER, *University of Western Ontario* (sponsored by John Paul Minda)—In regulatory focus theory a promotion focus and prevention focus stem, respectively, from the approach and avoidance systems thought to underlie human behavior. Category-learning research suggests that cognitive flexibility is enhanced when regulatory focus matches the reward structure of the task. However, the effect of regulatory focus on classification alone has not been studied. The present study explored regulatory focus effects, using perceptual triad classification. Triads could be classified using a single-dimensional match or overall similarity. Previous research has shown that a promotion focus enhances global processing and a prevention focus enhances local processing. We hypothesized that subjects with a promotion focus would be more likely to classify using overall similarity, which requires global processing, and prevention focus subjects would be more likely to classify using a single-dimensional match, which requires local processing. Our hypotheses were supported, and we suggest that regulatory focus may affect early visual processing.

(1043)

Category Learning by Classification and Inference With a More Complex Category Structure. GUY L. LACROIX & GLEN HOWELL, *Carleton University*—Yamauchi and Markman (1998) have shown that classification and inference learners are equally successful in classifying prototypical items after training. Moreover, inference learners are more likely to select a prototypical feature in a transfer inference task than are classification learners. We argue that these results may be category structure specific. Thus, in the present experiment, we used a category structure that included four general categories with exemplars that were made up of three features that could take one of nine values. During training, participants performed an inference or a classification task for 768 or 1,920 trials. At transfer, classification learners were more accurate and faster to classify prototypical items than were inference learners. Furthermore, under certain conditions, they selected